→ USPTO

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1. (Original) An implantable defibrillation lead, comprising:
 - a coiled defibrillation electrode;
 - a cover at least partially surrounding the coiled electrode resulting in a covered electrode;
 - the cover comprising a porous polymer,
- the cover being electrically non-conductive in a dry state and conductive when implanted to provide effective conduction of a defibrillation electrical charge; and
 - the cover having a thickness of less than about 0.13 mm;
 - wherein the cover provides a barrier to tissue attachment.
- 2. (Original) The lead of claim 1 wherein the cover has a thickness of less than about 0.10 mm.
- 3. (Original) The lead of claim 1 wherein the cover has a thickness of less than about 0.07 mm.
- 4. (Original) The lead of claim 1 wherein the cover has a thickness of less than about 0.05 mm.
- 5. (Original) The lead of claim 1 wherein the cover has a thickness of less than about 0.04 mm.
- 6. (Original) The lead of claim 1 wherein the cover has a thickness of less than about 0.03 mm.
- 7. (Original) The lead of claim 1 wherein the cover has a thickness of less than about 0.01 mm.
- 8. (Original) The lead of claim 1 wherein the porous polymer comprises PTFE.
- (Original) The lead of claim 8 wherein the PTFE comprises porous expanded PTFE.
- 10. (Original) The lead of claim 9 wherein the ePTFE comprises multiple layers of ePTFE film.
- 11. (Original) The lead of claim 1 wherein when compared in a force-to-deflect test, a ratio of force-to-deflect of said covered electrode to the coiled electrode without cover is less than about 35:1.
- 12. (Original) The lead of claim 1 wherein when compared in a force-to-deflect test, a ratio of force-to-deflect of said covered electrode to the coiled electrode without cover is less than about 10:1.

- 13. (Original) The lead of claim 1 wherein said porous polymer cover is provided with a wetting agent.
- 14. (Original) The lead of claim 13 wherein said wetting agent comprises polyvinyl alcohol.
- 15. (Original) The lead of claim 1 wherein said lead is easily extracted from a body within which it has been implanted.
- 16. (Original) The lead of claim 1 wherein said cover exhibits no visually apparent mechanical disruption when viewed under 30X microscopy, following testing in a saline solution with a series of 20 biphasic single cycle voltage pulses.
- 17. (Original) The lead of claim 1 having a fatigue life of at least 1 million cycles.
- 18. (Original) The lead of claim 17 having a fatigue life of at least 5 million cycles.
- 19. (Original) The lead of claim 17 having a fatigue life of at least 100 million cycles.
- (Original) The lead of claim 17 having a fatigue life of at least 400 million cycles.
- 21. (Original) The lead of claim 1 in combination with a pulse generator.
- 22. (Original) An implantable defibrillation lead, comprising: a coiled defibrillation electrode; a cover at least partially surrounding the coiled electrode; the cover comprising a porous polymer; the cover being provided with a treatment of a wetting agent; and the cover having a thickness of less than about 0.13 mm; wherein the cover provides a barrier to tissue attachment.
- 23. (Original) The lead of claim 22 wherein the cover has a thickness of less than about 0.10 mm.
- 24. (Original) The lead of claim 22 wherein the cover has a thickness of less than about 0.07 mm.

- 25. (Original) The lead of claim 22 wherein the cover has a thickness of less than about 0.05 mm.
- 26. (Original) The lead of claim 22 wherein the cover has a thickness of less than about 0.04 mm.
- 27. (Original) The lead of claim 22 wherein the cover has a thickness of less than about 0.03 mm.
- 28. (Original) The lead of claim 22 wherein the cover has a thickness of less than about 0.01 mm.
- 29. (Original) The lead of claim 22 wherein the porous polymer comprises PTFE.
- 30. (Original) The lead of claim 29 wherein the PTFE comprises porous expanded PTFE.
- 31. (Original) The lead of claim 30 wherein the ePTFE comprises multiple layers of ePTFE film.
- 32. (Original) The lead of claim 22 wherein when compared in a force-to-deflect test, a ratio of force-to-deflect of said covered electrode to the coiled electrode without cover is less than about 35:1.
- 33. (Original) The lead of claim 22 wherein when compared in a force-to-deflect test, a ratio of force-to-deflect of said covered electrode to the coiled electrode without cover is less than about 10:1.
- 34. (Original) The lead of claim 22 wherein said wetting agent comprises polyvinyl alcohol.
- 35. (Original) The lead of claim 22 wherein said lead is easily extracted from a body within which it has been implanted.
- 36. (Original) The lead of claim 22 wherein said cover exhibits no visually apparent mechanical disruption when viewed under 30X microscopy, following testing in a saline solution with a series of 20 biphasic single cycle voltage pulses.
- (Original) The lead of claim 22 having a fatigue life of at least 1 million cycles.
- (Original) The lead of claim 37 having a fatigue life of at least 5 million cycles.
- (Original) The lead of claim 37 having a fatigue life of at least 100 million cycles.

- (Original) The lead of claim 37 having a fatigue life of at least 400 million cycles.
- 41. (Original) The lead of claim 22 in combination with a pulse generator.
- 42. (Currently amended) An implantable defibrillation lead, comprising: an electrode;

a cover in contact with the electrode, said cover comprised of a porous polymer; wherein the porous polymeric cover has a thickness of less than about 0.13mm; and wherein the cover is non-conductive in a dry state and provides rapid re-wetting following a transmission of a series of electrical discharges; and wherein said lead is configured for use as an implantable defibrillator lead.

- 43. (Original) The lead of claim 42 wherein the cover provides a barrier to tissue attachment.
- 44. (Original) The lead of claim 42 wherein the porous polymer cover further comprises PTFE.
- (Original) The lead of claim 44 wherein the PTFE comprises porous expanded PTFE.
- 46 (Original) The lead of claim 45 wherein the ePTFE comprises multiple layers of ePTFE film.
- 47. (Canceled)
- 48. (Original) The lead of claim 42 wherein said porous polymer cover is provided with a wetting agent.
- (Original) The lead of claim 48 wherein said wetting agent comprises polyvinyl alcohol.
- 50. (Original) The lead of claim 42 wherein said lead is easily extracted from a body within which it has been implanted.
- 51. (Original) The lead of claim 42 in combination with a pulse generator.